

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:

STEPHEN M. ALLEN ET AL.

CASE NO.: BB-1163USDIV

SERIAL NO.: UNKNOWN

GROUP ART UNIT: UNKNOWN

FILED: CONCURRENTLY HEREWITH

EXAMINER: UNKNOWN

FOR: PLANT SUGAR TRANSPORT
PROTEINS

Assistant Commissioner for Patents
Washington, DC 20231

Preliminary Amendment

This is submitted to facilitate prosecution of the above-identified application.

In the Claims

Kindly cancel claims 2-15.

Kindly add the following new claims:

--16. An isolated nucleic acid fragment comprising:

(a) a nucleotide sequence encoding a polypeptide having sugar transport protein activity, wherein the amino acid sequence of the polypeptide and the amino acid sequence of SEQ ID NO:18, 20, 22, 24, 26 and 28 have at least 66% sequence identity; or

(b) the complement of the nucleotide sequence of (a).

17. The isolated nucleic acid fragment of claim 16, wherein the amino acid sequence of the polypeptide and the amino acid sequence of SEQ ID NO:18, 20, 22, 24, 26 and 28 have at least 90% sequence identity.

18. The isolated nucleic acid fragment of claim 16, wherein the amino acid sequence of the polypeptide and the amino acid sequence of SEQ ID NO:18, 20, 22, 24, 26 and 28 have at least 95% sequence identity.

19. The isolated nucleic acid fragment of Claim 16 wherein the nucleotide sequence of the fragment corresponds to any of the nucleotide sequences set forth in SEQ ID NO:17, 19, 21, 23, 25 and 27.

20. A recombinant DNA construct comprising the isolated nucleic acid fragment of any of Claims 16 - 19 operably linked to at least one regulatory sequence.

21. A vector comprising the isolated nucleic acid fragment of claim 16 - 19.

22. A method for transforming a cell, comprising transforming a cell with the recombinant DNA construct of claim 20.

23. A cell comprising the recombinant DNA construct of Claim 20.

24. A method for producing a plant comprising transforming a plant cell with the isolated nucleic acid fragment of any of claims 16 - 19 and regenerating a plant from the transformed plant cell.

25. A plant comprising the recombinant DNA construct of claim 20

26. A seed comprising the recombinant DNA construct of claim 20.

27. An isolated polypeptide having sugar transport activity, wherein the amino acid sequence of the polypeptide and the amino acid sequence of SEQ ID NO:18, 20, 22, 24, 26 and 28 have at least 75% identity.

28. The polypeptide of claim 27, wherein the amino acid sequence of the polypeptide and the amino acid sequence of SEQ ID NO:18, 20, 22, 24, 26 and 28 have at least 66% identity.

29. The polypeptide of claim 27, wherein the amino acid sequence of the polypeptide and the amino acid sequence of SEQ ID NO:18, 20, 22, 24, 26 and 28 have at least 90% identity.

30. The polypeptide of claim 27, wherein the amino acid sequence of the polypeptide and the amino acid sequence of SEQ ID NO:18, 20, 22, 24, 26 and 28 have at least 95% identity.

31. A method for isolating a polypeptide encoded by the polynucleotide of Claim 16 comprising isolating the polypeptide from the cell of claim 23.--

Remarks

Claims 2- 15 have been cancelled, and claims 16-31 have been added. This case is a divisional application under 37 CFR §1.53(b). The present application is a divisional of Application No. 09/291,922 filed on April 14, 1999 which claimed the benefit of priority of Provisional Application No. 60/083,044 filed April 24, 1998.

Support for the new claims can be found in the specification and claims as originally filed. Thus, now new matter has been added.

Enclosed herewith along with this Preliminary Amendment is an Information Disclosure Statement setting forth all references which had been cited by Applicants or the Examiner in connection with the above-identified applications.

Please charge any fees which are required in connection with the filing of this Preliminary Amendment and Information Disclosure Statement to Deposit Account No. 04-1928 (E. I. du Pont de Nemours and Company).

Respectfully submitted,

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Date: January 17, 2002

Enclosure